PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Application No.:	10/574,665	Confirm. No.:	7734
Filing Date:	March 13, 2007	Examiner:	Patrick L. Edwards
First Inventor:	Thomas Giering	Art Unit:	2624
Attorney No.:	GIER3006/JJC/BEL	Customer No.:	23364
For:	APPARATUS AND METHOD FOR CHECKING DOCUMENTS OF VALUE		

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

This is an appeal brief filed pursuant to the appellant's appeal to the Board of Patent Appeals and Interferences from the final rejection of claims 1-23 in the above-identified application.

I. REAL PARTY OF INTEREST

The real party of interest is the assignee of record: Giesecke & Devrient Gmbh.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-3, 6-7, 10, 15, 17-19, and 21-22 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*).

Claims 4, 5, 12, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of U.S. patent 6,741,727 (*Hirasawa*).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of U.S. patent 6,636,624 (*Raterman*).

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of European publication EP 0744716 (*Cummings*).

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of U.S. patent 6,974,623 (*Schwenk*).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of English publication GB 2122743A (*Bergstrom*).

Claims 8-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of U.S. patent 5,652,802 (*Graves*).

Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and further in view of U.S. patent 4,451,521 (*Kaule*).

Claims 1-3, 6-7, 10, 15, 17-19, and 21-22 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and U.S. patent 6,974,623 (*Schwenk*).

Claims 4, 5, 12, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and U.S. patent 6,974,623 (*Schwenk*) and further in view of U.S. patent 6,741,727 (*Hirasawa*).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and U.S. patent 6,974,623 (*Schwenk*) and further in view of U.S. patent 6,636,624 (*Raterman*).

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and U.S. patent 6,974,623 (*Schwenk*) and further in view of European publication EP 0744716 (*Cummings*).

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Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*) and U.S. patent 6,974,623 (*Schwenk*) and further in view of U.S. patent 4,451,521 (*Kaule*).

Claims 1-23 are pending.

Independent claims 1 and 19 are appealed herein.

Claims 2-18 and 21-23 depend from claim 1.

Claim 20 depends from claim 19.

IV. STATUS OF AMENDMENTS

There are no outstanding amendments to the claims. The most recent amendment to the claims was filed on April 20, 2011. The recent amendment appears to have been entered and considered by the examiner as reflected by the Advisory Action dated May 19, 2011.

V. SUMMARY OF CLAIMED SUBJECT MATTER

For the purposes of appeal, the rejection of independent claims 1 and 19 are appealed. The patentability of dependent claims 2-18 and 20-23 will rise or fall based on the determination of the patentability of claims 1 and 19.

1. Claim 1

Claim 1 describes an apparatus (2) for checking documents of value (BN) with luminescent feature substances (15) (Figs. 1 and 2; paras. [0018], [0020]). The apparatus (2) includes an illuminating apparatus (7) for illuminating the document of value (BN) along a plurality of measuring tracks (e.g., S1, S2) extending across the document of value and exciting the luminescent feature substances (15) such that the luminescent feature substances (15) emit luminescence radiation (Figs. 1 and 2; paras. [0021], [0022]). Additionally, the apparatus (2) includes a sensor device (8) for measuring the luminescence radiation emitted by the illuminated document of value (BN) and an evaluation unit (6) for carrying out the checking on the basis of the measured values of the sensor device (8) (Figs. 2; para. [0023]).

The illumination apparatus (7), the sensor device (8), and the evaluation unit (6) are arranged to allow determining of a plurality of measured values of luminescence radiation along each one of the plurality of measuring tracks (e.g., S1, S2) (Figs. 2; paras. [0022], [0023]) . The evaluation unit (6) is arranged to integrate the measured values for each of the tracks (e.g., S1, S2) and to carry out the checking on the basis of the results of the integrated measured values for each of the tracks (e.g., S1, S2) (Fig. 2; para. [0023]).

2. Claim 19

Claim 19 describes a method for checking authenticity and/or nominal value of documents of value (BN) with luminescent feature substances (15) (Figs. 1 and 2; paras. [0007], [0030]). This method has the steps of illuminating the document of value (BN) to be checked along a plurality of measuring tracks (e.g., S1, S2) extending across the document of value (BN) thereby exciting the luminescent feature substance (15) to emit luminescence radiation (Fig. 2; paras. [0021], [0022]). Then the luminescent radiation by the luminescent feature substance (15) of the illuminated document of value (BN) is measured along the plurality of tracks (e.g., S1, S2) (para. [0023]). A plurality of measured values of the luminescence radiation emitted by the luminescent feature substance (15) of the illuminated document of value (BN) is determined along each of the plurality of measuring tracks (e.g., S1, S2) (para. [0023]). The measured values for each of the plurality of tracks (e.g., S1, S2) are then integrated and the authenticity and/or nominal value of the document of value (BN) is checked on the basis of the integrated measured values for each of the plurality of tracks (e.g., S1, S2) (paras. [0023]-[0026]).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3, 6-7, 10, 15, 17-19, and 21-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*).

Claims 1-3, 6-7, 10, 14, 15, 17-19, and 21-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. patent 4,189,235 (*Guter*), U.S. patent 7,426,291 (*Okamura*), and U.S. patent 6,974,623 (*Schwenk*).

The rejection of claims 1 and 19 is currently appealed herein.

VII. ARGUMENT

A. Overview

Claims 1 and 19 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 4,189,235 (*Guter*) in view of U.S. patent 7,426,291 (*Okamura*).

Claims 1 and 19 are also currently rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. patent 4,189,235 (*Guter*), U.S. patent 7,426,291 (*Okamura*), and U.S. patent 6,974,623 (*Schwenk*).

The proposed combination of *Guter* and *Okamura* fails to disclose or suggest to one having ordinary skill in the art integrating measured values of a luminescence radiation emitted from excited luminescent feature substances as recited in claims 1 and 19. In the following arguments, it is submitted that 1) neither *Guter* nor *Okamura* disclose using luminescent feature substances, and 2) it would not be obvious in view of *Guter* or *Okamura* to integrate the measured values of luminescence radiation to check the authenticity of documents of value.

Moreover, the proposed combination of *Guter*, *Okamura*, and *Schwenk*, as combined, fails to disclose integrating measured values of a luminescence radiation emitted from excited luminescent feature substances are recited in claims 1 and 19.

B. Pertinent Law on Obviousness

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (C.A.F.C. 1988). To do so, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of

ordinary skill in the art to lead an individual to combine the relevant teaching of the references. *Id.* In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), *viz.*, 1) the scope and content of the prior art; 2) the differences between the prior art and the claims at issue; and 3) the level of ordinary skill in the art.

The Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *See In re Oetiker*, 977 F.2d 1443, 1445, 25 USPQ2d 1443, 1444 (C.A.F.C. 1992). In order to establish a *prima facie* case of obviousness, the Examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *See Fine*, 837 F.2d at 1074.

Furthermore, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (C.A.F.C. 2006). Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444.

Moreover, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *See In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (C.A.F.C. 1984); MPEP § 2143.01.

C. Reasons Why Claims 1 and 19 are not Obvious Over *Guter* in view of *Okamura*

1. The combination of *Guter* and *Okamura* fails to disclose exciting luminescent feature substances to emit luminescence radiation

An issue on appeal is that *Guter* in view of *Okamura* fails to disclose exciting luminescent feature substances such that the luminescent feature substances emit luminescence radiation, as required by claims 1 and 19. Although the Office Action states that it would be difficult to envision a bank-note that lacked "luminescent feature substances," the Office Action has not provided any rationale to show that one having ordinary skill in the art would modify the proposed combination of *Guter* and *Okamura* to include luminescent substances. Specifically, *Guter* is completely silent with respect to the bank notes containing any type of luminescent feature substance or emitting luminescent radiation; while *Okamura* only discloses capturing MICR text from a check by using character recognition and does not disclose exciting a luminescent feature substance.

As disclosed in the specification, the luminescence radiation is created by exciting the luminescent feature substances (15) and a sensor device (8) detects the luminescence radiation (para. [0018]). In other words, the luminescent feature substances are excited to luminescently glow (para. [0022]). The luminescence radiation is then captured by the sensors for a plurality of measured values corresponding along measured tracks and then added up (para. [0023]).

Guter fails to disclose any type of luminescent feature substance or emitting luminescent radiation that can be used to determine a plurality of measured values of luminescence radiation along each one of the plurality of measuring tracks. Instead, *Guter* discloses a

test device that determines the degree of soiling or dirt accumulation on a bank-note by measuring the contrast between the amount of light passing between photodiodes, i.e., the transparency of the bank-note (col. 1, l. 56 to col. 2, l. 16).

As taught by *Guter*, the sensor unit has photodiodes (10a, 10b, 10c) and a filter combination (9) arranged between the lens system (8) and sensor unit (10), which filters out the impinging radiation of the spectral components of the light (col.3, ll. 46-55). When one of the photodiodes (10a, 10b, 10c) is completely covered by a soiled crease (17) on a bank note (4), a substantially smaller amount of light is received by the photodiode to produce a substantially smaller output signal to determine the contrast to calculate the degree of soiling (col.4, ll. 40-46). In other words, the only radiation produced in *Guter* is the radiation outputted from a light source (5) and received by photodiodes (10a, 10b, 10c).

In view of these objectives, the impinging radiation of *Guter* is not luminescence radiation emitted from excited luminescent feature substances as recited in the claims.

The Office Action relies on *Okamura* to disclose capturing data along a plurality of measuring tracks extending transversely across the document. *Okamura* also fails to disclose or suggest determining a plurality of measured values of luminescence radiation that are emitted from excited luminescent feature substances. Instead, *Okamura* is only directed to capturing MICR text from a check and converting it into a binary image using character recognition (col.8, ll. 55-67).

Therefore, the proposed combination of *Guter* and *Okamura* fails to disclose or suggest exciting luminescent feature substances to emit luminescence radiation as recited in claims 1 and 19. At most, the proposed combination would lead one having ordinary skill in the art to measuring the transparency of a bank-note along different

predetermined positions. The transparency for each section would be measured by using photodiodes (10a, 10b, 10c) to measure the degree of dirt accumulation by filtering out the impinging radiation produced from the light source (4).

The Office Action has not provided any objective reasoning with rational underpinning to show that one having ordinary skill in the art would then be led or motivated from this disclosure to illuminating a luminescent feature substance such that the luminescent feature substances emit luminescence radiation as recited in claims 1 and 19, since illuminating from a light source is markedly different than emitting luminescence radiation from luminescent features substances.

In fact, there is no disclosure in either *Guter* or *Okamura* of using any luminescent feature substances; therefore, there is no need to use luminescent feature substances or exciting the luminescent feature substance to emit luminescence radiation in the proposed combination. From these disclosures, the proposed combination of *Guter* and *Okamura* would not have suggested or motivated one having ordinary skill in the art to such features, since *Guter* only discloses measuring light through a bank-note and *Okamura* only discloses converting MICR text into binary image data.

Therefore, the proposed combination of *Guter* and *Okamura* fails to disclose or suggest exciting a luminescent feature substance to emit luminescence radiation as recited in claims 1 and 19.

Additionally, since both *Guter* and *Okamura* are silent as to exciting a luminescent feature substance to emit luminescence radiation, the proposed combination of *Guter* and *Okamura* cannot be considered to disclose a sensor to capture the emitted luminescence radiation. Instead, as discussed above, *Guter* only discloses using photodiodes to

measure the degree of dirt accumulation by filtering out the impinging radiation produced from the light source.

Measuring light produced from a light source does not disclose a sensor that measures the luminescence radiation produced from an excited luminescent feature substance. When luminescent feature substances are excited by optical radiation, the substance emits luminescence radiation, which is an optical radiation emitted by the luminescent feature substances at a wavelength that is different from the wavelength of the exciting radiation. In other words, the sensor device (10a, 10b, 10c) disclosed in *Guter* only measures the radiation produced from the light source (4); whereas the sensor device of the present claims measures a different source of radiation, i.e., the luminescence radiation emitted from the luminescent feature substances.

Moreover, it is the Office Action's position that it would be obvious to a person having reasonable skill in the art to modify the radiation sensing method and apparatus of *Guter* to use luminescence radiation emitted by a luminescent feature substance, which is well known in the art. However, *Guter* cannot use luminescent features because the proposed use would render the prior art invention being modified unsatisfactory for its intended purpose, so there would be no suggestion or motivation to make the proposed combination. *In re Gordon*, 733 F.2d 900 (C.A.F.C. 1984).

As discussed above, *Guter* discloses measuring the degree of soiling by determining the contrast measurement between photodiodes. If luminescent materials were excited to produce luminescence radiation, the additional produced light would affect the amount of light received by the photodiodes and produce a false measurement of the degree of soiling.

The Applicants cannot find in the teachings of *Guter* any indication of using any sort of luminescent feature substances to emit luminescence radiation. The Office Action has not provided any evidence that *Guter* would properly work for its intended purpose of measuring the degree of soiling by using luminescent feature substances as recited in claims 1 and 19.

2. The combination of *Guter* and *Okamura* fails to disclose determining a plurality of measured values of luminescence radiation along each one of the plurality of measuring tracks and integrating the measured values

Furthermore, since the proposed combination of *Guter* and *Okamura* fails to disclose or suggest exciting luminescent features substances to emit luminescence radiation, the Office Action has not established that the proposed combination discloses determining a plurality of measured values of luminescence radiation along each one of the plurality of measuring tracks and integrating the measured values, as required by claims 1 and 19.

As the specification discusses, the addition of the luminescence radiation that is emitted by an illuminated track of the document permits a secure recognition even of luminescent feature substances with low luminous intensity (para. [0009]). When the feature substances to be checked are present randomly distributed in the document of value, even fluctuations can be compensated, which may arise during a local measuring due to fluctuations in quantities of the feature substances in different areas of the document of value (para. [0009]).

The Office Action admits that *Guter* fails to disclose a plurality of measuring tracks and relies on *Okamura* as disclosing capturing data along a plurality of measuring tracks extending transversely across the document.

However, *Okamura* fails to disclose exciting a luminescent feature substance to emit luminescence radiation as recited in claims 1 and 19. *Okamura* at most discloses acquiring gray scale data from part of the check from the first scan, i.e., preliminary scan, to convert the image data for the entire check to a binary image data (col. 7, l. 46-54). A first scan (preliminary scan) is used to determine a suitable binarization method so that MICR text (48) can be detected in a subsequent scan (col.7, ll. 46-54). Preliminary scanning areas (T, T') are areas around the first detected MICR character and offset from the first detected MICR character (col.8, ll. 5-10).

It is readily evident that even if *Okamura* discloses a plurality of measuring tracks, the proposed combination of *Guter* and *Okamura* still fails to disclose illuminating a document of value along a plurality of measuring tracks to excite the luminescent feature substances such that the luminescent feature substances emit luminescence radiation as recited in claims 1 and 19, since neither *Guter* nor *Okamura* discloses measuring luminescence radiation emitted from luminescent feature substances.

At most, the proposed combination of *Guter* and *Okamura* would disclose using the transparency measurements between photodiodes at different predetermined positions to determine the degree of dirt accumulation. The Office Action has not provided any objective reasoning to show that one having ordinary skill in the art could then modify this teaching of different transparencies to be led to integrating the measured values of luminescence radiation to permit the secure recognition of the document of value. As discussed above, the features recited in claims 1 and 19 allow determining the measured values of luminescence radiation so that even if the luminescent feature substances have a low luminous intensity or are randomly distributed, the integration of the measured values along the illuminated tracks compensates for low luminous intensity and random distribution of the feature substance.

From the rejection, it appears that the correlation of illuminating a track of a bank-note to determine the transparency of *Guter* is made without consideration of the features recited in the claims. The Office Action attempts to define the luminescent feature substance, but fails to appreciate that the luminescent radiation is emitted from the excited luminescent feature substance along the illuminated tracks. Since the source and type of the radiation in *Guter* is different than luminescence radiation emitted from luminescent feature substances, it is insufficient to merely compare the depiction of the illumination radiation in *Guter* to the luminescence radiation emitted from the excited luminescent feature substance of the pending claims. The Office Action has not provided any rationale as to how one having ordinary skill in the art would be led from the illumination radiation from a light source in *Guter* or the predetermined areas of *Okamura* to a luminescent feature substance such that when excited emits luminescence radiation.

From these observations, it is submitted that the proposed combination of *Guter* and *Okamura* fails to disclose or suggest each and every limitation required by claims 1 and 19. As a result, the proposed combination of *Guter* and *Okamura* fails to render obvious each and every limitation of claims 1 and 19.

D. Reasons Why Claims 1 and 19 are not Obvious Over the Combination of *Guter, Okamura*, and *Schwenk*

Another issue on appeal is the proposed combination of *Guter*, *Okamura*, and *Schwenk*. The Office Action fails to establish that the proposed combination of *Guter*, *Okamura*, and *Schwenk* discloses at least exciting the luminescent features substances such that the luminescent feature substances emit luminescence radiation and integrating the measured values along the illuminated tracks as recited in claims 1 and 19.

The Office Action relies on *Schwenk* as disclosing measuring luminescent radiation to determine bank note authenticity. As discussed above, the proposed combination of *Guter* and *Okamura* fails to disclose luminescence radiation and *Schwenk* is not relied on as teaching a mottled fiber having luminescent characteristics but only using luminescent radiation to determine authenticity.

Therefore, the proposed combination of *Guter*, *Okamura*, and *Schwenk* would at most disclose using the measured transparency of the bank-notes at different predetermined positions to determine authenticity. The Office Action has not provided objective reasoning or rationale as to how the proposed combination of *Guter, Okamura*, and *Schwenk* would lead one having ordinary skill in the art to modify the combination to use luminescence radiation emitted from excited luminescent feature substances as recited in claims 1 and 19. As discussed above, the integration of the luminescence radiation allows the compensation of low luminous intensity and random distribution of the feature substances.

Moreover, even if the Office Action combined *Guter*, *Okamura*, and *Schwenk* to disclose the use of a mottled fiber having luminescent characteristics, the proposed combination would be improper, since the proposed modification would render *Guter* unsatisfactory for its intended purpose.

Specifically, as discussed above, *Guter* discloses measuring the amount of light passing through a banknote by using photodiodes (10a, 10b, 10c) to measure the amount of radiation from a light source (5). The photodiodes then convert the received amount of light to produce an electric signal.

On the other hand, *Schwenk* discloses a security paper with luminescent mottled fibers that represent an easily machine-readable code (col.1, ll. 44-47). The luminescent

substances use a narrow-band emission so that the spectral sensitivity range of a detector can be tuned to a narrow spectral interval, in which the emission band lies (col.2, ll. 26-30).

If the mottled fibers having luminescent characteristics as taught in *Schwenk* were used in *Guter*, the test device of *Guter* would not work properly in view of the photodiodes, since the transparency is measured by the conversion of light signals into electrical signals. As stated above, the production of additional luminescence radiation would invariably affect the photodiodes to give a false indication of the amount of soiling in the document to be checked. The Office Action has not provided any suggestion or discussion that the proposed combination would in fact allow the test device of *Guter* to work properly. Therefore, the proposed combination of *Guter*, *Okamura*, and *Schwenk* does not suggest or motivate one having ordinary skill in the art to modify the proposed combination to use a mottled fiber having luminescent characteristics.

Furthermore, the proposed combination would be beyond the simple substitution of known elements to give a predictable result. Based on *Schwenk*, by introducing mottled fibers containing luminescent characteristics to *Guter*, a person having ordinary skill in the art would have to determine the specific spectral interval in which the luminescent features substances would emit luminescence radiation. The skilled person would then have to take into account the distribution of the luminescent feature substances in the mottled fibers as well as the distribution of the mottled fibers in the bank-note. A modification of *Guter* based on *Schwenk* would therefore introduce added considerations to *Guter* without necessarily adding any benefit or improvement.

Therefore, the teachings of *Guter*, *Okamura*, and *Schwenk* would not lead one having ordinary skill in the art to the features recited in claims 1 and 19.

Reversal of the rejection of claims 1 and 19 under 35 U.S.C. § 103(a) in view of *Guter* in view of *Okamura* and the proposed combination of *Guter*, *Okamura*, and *Schwenk* is therefore warranted.

VIII. CONCLUSION

For the reasons set forth above, independent claims 1 and 19 of the pending application define subject matter that is not obvious over *Guter* in view of *Okamura* and the proposed combination of *Guter*, *Okamura*, and *Schwenk* within the meaning of 35 U.S.C. § 103(a).

Reversal of the rejection of claims 1 and 19, and allowance of these claims are respectfully requested.

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IX. CLAIMS APPENDIX

Claim 1. An apparatus for checking documents of value with luminescent feature substances, comprising

an illuminating apparatus for illuminating the document of value along a plurality of measuring tracks extending across the document of value and exciting the luminescent feature substances such that the luminescent feature substances emit luminescence radiation;

a sensor device for measuring the luminescence radiation emitted by the illuminated document of value;

an evaluation unit for carrying out the checking on the basis of the measured values of the sensor device;

wherein the illumination apparatus, the sensor device, and the evaluation unit are arranged to allow determining of a plurality of measured values of luminescence radiation along each one of the plurality of measuring tracks; and

wherein the evaluation unit is arranged to integrate the measured values for each of the tracks and to carry out the checking on the basis of the results of the integrated measured values for each of the tracks.

Claim 2. The apparatus according to claim 1, wherein the evaluation unit is arranged to obtain the integration of the measured values by an addition of a plurality of discrete measured values of either or both of the luminescence radiation and a time-integrated measuring of the luminescence radiation.

Claim 3. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out the evaluation both on the basis of the integrated luminescence measuring, and not-integrated measured values of the luminescence radiation corresponding to different spatial areas of the respective measuring track.

Claim 4. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out an in particular broadband evaluation of the spectral distribution of the integrated luminescence measuring.

Claim 5. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out the integration both with respect to the spatial distribution and/or the spectral distribution of the luminescence radiation.

Claim 6. The apparatus according to claim 1, wherein the apparatus is arranged to check documents of value having different luminescent feature substances which are contained individually or in combination in the document of value, and the evaluation unit is adapted as to be able to determine either or both of whether one of the different feature substances is contained in the checked document of value and which of the different feature substances is contained in the checked document of value.

Claim 7. The apparatus according to claim 1, further comprising a transport apparatus for transporting the documents of value past the illuminating apparatus and the sensor device in a transport direction parallel to the tracks, wherein the sensor device is arranged to carry out the integrated luminescence measuring along the measuring tracks.

Claim 8. The apparatus according to claim 1, wherein the sensor device is adapted to measure along a plurality of parallel tracks overlapping each other.

Claim 9. The apparatus according to claim 1, wherein the tracks have a width in a direction perpendicular to the tracks and the illumination apparatus, the sensor device and the evaluation unit arranged such that the sum of the widths of all tracks is larger than the dimension of the document of value in the direction perpendicular to the tracks.

Claim 10. The apparatus according to claim 1, wherein the illuminating apparatus produces a continuous illumination.

Claim 11. The apparatus according to claim 1, wherein the sensor device carries out a spatially resolved measuring in a direction along the track direction.

Claim 12. The apparatus according to claim 1, wherein the sensor device carries out a spectrally integrated measuring in a direction along the track direction.

Claim 13. The apparatus according to claim 1, wherein the sensor device has a plurality of sensors, each sensor being adapted to measure one individual track corresponding to one area of a coding.

Claim 14. The apparatus according to claim 1, wherein the sensor device comprises a plurality of sensors which have different spectral behaviors and the illuminating apparatus comprises a plurality of light sources which have different spectral behaviors.

Claim 15. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out a time-resolved evaluation of the integrated luminescence measuring.

Claim 16. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out the evaluation of the integrated luminescence measuring in a wavelength range of more than 800 nanometers.

Claim 17. The apparatus according to claim 1, comprising a nominal value sensor and/or a state sensor, the evaluation unit arranged to carry out the evaluation of the integrated luminescence measuring taking into account the nominal value of the checked document of value determined with the help of the nominal value sensor or the state of the checked

document of value determined with the help of the state sensor.

Claim 18. The apparatus according to claim 1, wherein the apparatus comprises one or more devices selected from the group: device for counting; device for sorting; device for depositing; device for paying out bank notes and a handheld checking device.

Claim 19. A method for checking authenticity and/or nominal value of documents of value with luminescent feature substances, comprising the steps:

illuminating the document of value to be checked along a plurality of measuring tracks extending across the document of value thereby exciting the luminescent feature substance to emit luminescence radiation;

measuring the luminescent radiation emitted by the luminescent feature substance of the illuminated document of value along the plurality of tracks;

determining a plurality of measured values of the luminescence radiation emitted by the luminescent feature substance of the illuminated document of value along each of the plurality of measuring tracks;

integrating the measured values for each of the plurality of tracks; and

checking the authenticity and/or the nominal value of the document of value on the basis of the integrated measured values for each of the plurality of tracks.

Claim 20. The method according to claim 19, wherein the luminescent feature substances are checked and are incorporated in and/or applied onto the document of value in random distribution.

Claim 21. The apparatus according to claim 1, wherein the sensor device is adapted to measure along a plurality of parallel tracks spaced apart from each other.

Claim 22. The apparatus according to claim 1, wherein the tracks have a width in a direction perpendicular to the tracks and the illumination apparatus, the sensor device and the evaluation unit arranged such that the sum of the widths of all tracks is smaller than the dimension of the document of value in the direction.

Claim 23. The apparatus according to claim 1, wherein the evaluation unit is arranged to carry out the evaluation of the integrated luminescence measuring in a wavelength range of more than 1000 nanometers.

X. EVIDENCE APPENDIX

There are no copies of evidence entered and relied upon in this appeal of the pending application.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings or decisions rendered by a court or the Board of Appeals in any proceeding identified in the related appeals and interferences section in the pending application